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Forests and floods.—According to MOORE,[45] forests exert no controlling influence upon rainfall, and very little upon the flow of the water after it reaches the earth's surface. While regretting the paucity of the data, he decides that the run-off of our rivers is not materially affected by any other factor than precipitation, that high waters are not higher and low waters are not lower than formerly, nor do floods occur more frequently and continue longer than formerly. In support of his contention that forestation exerts little or no effect upon precipitation, he shows that the presence or absence of forest covering affects only a thin stratum of air over the surface of the areas in question, whereas the conditions that control precipitation are confined to a much greater altitude and one not affected by the local irregularities occurring in the lower stratum. Statistics given for the Ohio River basin, where deforestation has been great, show that the flow of water in that river has exhibited no material change for the thirty-seven years for which measurements are available.—GEO. D. FULLER.

Evaporation and plant societies.—Evaporation is regarded as a very mportant factor in determining the character of plant societies, and several ecologists, measuring it with the most accurate instruments now available, are collecting interesting data from various localities. SHAW[46] determined the amount of evaporation at various stations in the Selkirk Mountains, ranging from 800 to 2900^m in altitude, extending his observations over a period of 12 weeks. The maximum evaporation was at 1100^m, while above this altitude there was a gradual but somewhat irregular diminution.

DICKEY,[47] in a bog habitat, found evaporation in the open central area occupied by Sphagnum, Oxycoccus, and Eriophorum much greater than in the surrounding maple-alder zone, and that rainfall had a more marked effect upon the rate of evaporation in the latter situation. In the maple-alder zone the appearance of foliage in the spring and the fall of leaves in the autumn affected the rate materially.—GEO. D. FULLER.

Stem gall on Commelina.—The LEEUWEN-REIJNVAANS[48] give a discussion of the gross and anatomical character of a stem gall on *Commelina communis* L. It is caused by the larva of a lepidopterous insect, *Aegeria uniformis* Snellen. The larval chamber originates in the central axis of the stem, and the enlargement of the stem at this point is on one side, instead of radial as is the case with most galls which originate in the central axis of the stem. The enlargement is due mainly to the increase in the amount of the parenchyma tissue. The collenchyma is broken on the side of the greatest enlargement, so that in cross-section it appears as a crescent partly inclosing the gall. The vascular bundles are pushed apart on the side where the swelling is greatest, and in cross-section form a crescent pattern instead of a ring. Small vascular bundles penetrate the tissues of the gall. The nutritive tissue is abundant and the sclerenchyma tissue is more abundant than in most lepidopterous galls.—MEL. T. COOK.

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[45] MOORE, WILLIS L., Influence of forests on climate and on floods. Report to Committee on Agriculture, U.S. House of Representatives. pp. 38. 1910.

[46] SHAW, C. H., Present problems in plant ecology. III. Vegetation and altitude. Amer. Nat. **43**:420–431. 1909.

[47] DICKEY, MALCOLM G., Evaporation in a bog habitat. Ohio Nat. **10**:17–23. 1909.

[48] LEEUWEN-REIJNVAAN, J. UND W., DRS. VON. Kleinere cecidologische Mitteilungen. Ber. Deutsch. Bot. Gesell. **27**:572–581. *figs. 6.* 1910.

Light and germination.—Where light was supposed to be necessary for any considerable germination, LEHMAN finds[49] that in *Ranunculus sceleratus* other stimuli can be substituted for light. One per cent KNOP'S solution gives a greater percentage of germination in darkness than distilled water in light. In contrast to wet filter paper generally used as a substratum in such experiments, earth was found to stimulate germination greatly, water extracts of earth made by boiling were less effective, and extracts made with cold water showed no stimulation. If these seeds are exposed to germinative conditions in darkness for twenty or more days, light is then not effective. The author calls such seeds "dunkelharten" or "dunkelstarren," in contrast to the "lichtharte" seeds of Nigella.[50] *Stellaria media*, indifferent to light in its germination, was greatly stimulated by such substrata as KNOP'S solution and earth.—WILLIAM CROCKER.

Selaginella preissiana.—The extremely small xerophytic *Selaginella preissiana*, found in West Australia, Victoria, and Tasmania, is described by BRUCHMANN.[51] The cotyledons are slightly larger than the foliage leaves. The first dichotomy gives an erect branch about 3^{cm} high; the other branch becomes the creeping rhizome, which gives off erect shoots right and left. Growth is by means of a single polyhedral apical cell. The stem is protostelic, the hypocotyl having a single exarch protoxylem point.

In the root there are three groups of initials: periblem and plerome having a common group, and dermatogen and calyptrogen each having a group. Root hairs are wanting, and epidermis and cortex are infested with an endophytic fungus. The hyphae were observed penetrating the epidermis from the soil.—W. J. G. LAND.

Cellulose-forming enzyme.—In continuing his capillary analysis of enzymes, GRÜSS[52] claims to have found, as his most important result, a cellulose-forming enzyme which he terms cytocoagulase. The material condensed was dissolved

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[49] LEHMAN, ERNST, Zur Keimungsphysiologie und Biologie von *Ranunculus sceleratus* L. und einiger anderen Samen. Ber. Deutsch. Bot. Gesell. **27**:476–494. 1909.

[50] KINZEL, WILHELM, Ueber den Einfluss des Lichtes auf die Keimung. "Lichtharte" Samen. Ber. Deutsch. Bot. Gesell. **25**:269–276. 1907.

[51] BRUCHMANN, H., Ueber *Selaginella preissiana* Spring. Flora **100**:288–295. *figs. 8.* 1910.

[52] GRÜSS, J., Kapillaranalyse einiger Enzyme. II. Ber. Deutsch. Bot. Gesell. **27**:313–319. 1909.